

# White Paper Report

Report ID: 107063

Application Number: PF5027212

Project Director: Karen Daly (karendaly@dumbartonhouse.org)

Institution: National Society of the Colonial Dames of America

Reporting Period: 10/1/2012-9/30/2013

Report Due: 12/31/2013

Date Submitted: 12/24/2013



**NEH Sustaining Cultural Heritage Collections White Paper**  
**Dumbarton House**  
**Headquarters & Museum**  
**The National Society of The Colonial Dames of America**

***Authors*** – Karen Daly, Bridgitte Rodriguez, Sarah Sutton Brophy

***Summary*** –

Dumbarton House and its collections tell the story of becoming a Capital City during a time of great uncertainty and illustrates the role of women in the historic preservation movement nationally. Staff and volunteers at Dumbarton House, the National Headquarters & Museum of The National Society of The Colonial Dames of America (NSCDA), began their informal green work around 2000, gradually formalizing this work until 2011, when Dumbarton House submitted an NEH Planning Grant application to the Sustaining Cultural Heritage Collections program.

This project explored and recommended respectful, sustainable approaches to collections care and preventive conservation for the house and its collections. Recent failures in Dumbarton House's 21-year-old HVAC [heating, ventilation, and cooling] system indicated a planned upgrade based on a thoughtful review, instead of crisis-response, should be a critical institutional responsibility. The staff, board, assessors, and maintenance technicians had voiced concern over issues that confront the historic house, the collections, and the ability to efficiently and effectively manage the current HVAC system, so an interdisciplinary team was created to review the years of environmental conditions records, CAP assessments on the collections and the historic structure, and space studies; and then explore and recommend environmentally-sustainable practices and energy management. The consultants spent a day exploring the site, concluding with recommended assessments. After the assessments and over six months of monitoring, the consultants reconvened to review conditions and to make final recommendations for the future Dumbarton House HVAC system.

**NSCDA**

Museum & Headquarters ★ The National Society of The Colonial Dames of America  
202-337-2288 ★ 2715 Q Street, NW, Washington, DC 20007-3071 ★ [www.DumbartonHouse.org](http://www.DumbartonHouse.org)

***Background –***

Dumbarton House is documented as "an outstanding representation of American architecture of the early Federal Period"; the house and its collections tell the story of life in the City of Washington during the formation of the Early Republic and a new national identity, and the experience of becoming a Capital City during a time of great uncertainty and great accomplishments. Dumbarton House also illustrates the past and present role of women and of The National Society of the Colonial Dames of America in the national historic preservation movement.

The staff and volunteers at Dumbarton House, National Headquarters & Museum of The National Society of The Colonial Dames of America (NSCDA), began their informal green work around 2000 with an office recycling program, gradually recognizing and formalizing this work in collections care, thoughtful facility use, and environmental sustainability as documented priorities in the Strategic Plan, and by using 100% wind energy for electric needs and purchasing carbon offsets for natural gas use. In 2011, Dumbarton House submitted an NEH Planning Grant application to the Sustaining Cultural Heritage Collections program.

The NSCDA has been active nationally in the historic preservation movement since its founding in 1891. To date the NSCDA and its corporate [state] societies owns, maintains, or supports over 80 historic properties and collections across the United States. Throughout the NSCDA's existence historic preservation has been a core tenant of their mission, and Dumbarton House, serving as their National Headquarters, strives to continue to be a leader in the field. For the staff, that preservation effort and sustainability are inseparable.

Dumbarton House's green journey began with individual practices by staff members interested in operating the museum and headquarters in an environmentally friendly way. They saw this as a path to reduce impact and to lower operational costs. By institutionalizing current green practices into policies of sustainability, and exploring additional sustainability options the non-profit could direct as much as possible of any income towards the preservation and education mission, rather than operating costs. By also reducing our impact on the environment, the institution is being respectful of the local and larger communities it serves.

This 1800 house was relocated approximately 50 yards to the present location in 1915. Subsequent additions underground, and conversion of the wings to 20<sup>th</sup> century uses (with 21<sup>st</sup> century updates) have created multi-use spaces supporting the historic core for a total space near 10,000 s.f. Managing system replacements and upgrades must take into account collections care conditions for the house and the objects, visitor comfort, staff use, and special events.

***Grant Project Overview –***

This Sustaining Cultural Heritage Collections project explored and recommended respectful, sustainable approaches to collections care and preventive conservation for the house and its collections. We began the projects with consultants spending a day exploring the site, and then meeting to recommend assessments to help with decision-making. Included on the team were:

- Conservator Brian Ramer
- Mechanical Engineer David Hoffman and colleagues from Gipe Associates, Inc.
- Preservation Architect C. Richard Bierce, replaced by Al Cox mid-grant due to health issues
- HVAC System Technician Jimmy Beach of Calvert Jones, ABM
- Sustainability Consultant Sarah Sutton Brophy
- Board Members and Building & Grounds Committee Chairmen Sally Smyser and Amy Dewey
- Staff
  - Executive Director Karen L. Daly
  - Deputy Director & Curator S. Scott Scholz
  - Collections Assistant Jerry Foust
  - NSCDA Membership Manager and “Green Advocate” Bridgitte Rodriguez
  - Education Manager Kanani Hoopai

During the day we toured the site, identified project goals and desired outcomes, and discussed and identified preliminary recommendations for assessments, remediation, and monitoring to conduct during the grant period to inform our study. Board member Sally Smyser, chair of the Building and Grounds Committee, mentioned at the close of the day how valuable it was to have a group of professionals working as a team on this project and she could see how that approach would contain costs and time needed to reach the best solution. She was pleased and encouraged by the experience. The consultants submitted initial reports within two weeks of the conference day, including observations and recommended interim assessments. The staff clarified assessment requests, collected estimates and then worked with team members to select the best vendors. The tests and assessments conducted included

- a Systems Operations Manual
- an Energy Audit
- a review of geothermal reports from abutters
- a Staff Practices Audit to reduce consumption of energy and other resources
- a Chilled Water & Hot Water Air and Water Survey
- updated Energy Star Portfolio Manager Site online
- adjustment of thermostat set points
- evaluation of HOBO data for collections storage and temporary exhibition locations

In July 2013, after the assessments and reports but before the final meeting, the three-year-old compressor for the air conditioning chiller failed due to lightning storms. Because the team was already in place and was familiar with the site, its members helped the director decide to replace the compressor (covered by insurance), rather than invest in an entirely new (and much more costly) chiller before the Study Team was able to fully analyze the results of our grant efforts and make an informed decision on recommendations for the future system.

In August 2013 the consultants reconvened to review conditions and reports and made the final recommendation to continue to explore overhauling the entire system by redesigning it with geothermal and (possibly) variable refrigerant systems.

### *Other Green Efforts –*

While the grant project proceeded, Green Advocate Brigitte Rodriguez worked with staff to create a Sustainability Action Plan which has since been approved and adopted by the board, and is now part of the Master Site Plan- which lays out the administration of the site. It is now regular practice to discuss new and ongoing green initiatives at Board meetings; share a page on our website for Sustainability; promote our green initiatives through existing marketing sources including social media; apply for grants to research furthering sustainable activities; and involve Dumbarton House in the green initiatives of our local city and community. In August, Dumbarton House was awarded a Mayor's Sustainability Award, the first historic site or museum to be selected for such an honor, in recognition of our green efforts. That award attracted a visit from international leaders attending a State Department-sponsored educational program in DC during October 2013 to learn from us about sustainable practices at a small business.

### *Primary Recommendations –*

A full list of recommendations suggested by the HVAC Study panel is included in the Final Performance Report appendices. Primary, summary recommendations include:

- Performing a Life Cycle Cost Analysis to compare HVAC system upgrade options (retrofitting existing vs. geothermal) with quantifiable data on long-term costs and benefits
- Refining staff/visitor usage of the site and procedures to better manage energy efficiency
- Researching and implementing appropriate methods to better seal our historic site, considering windows, doors, insulation, walls, and roofs
- Conducting a Phase I Archaeological Survey to determine if there are any historic remnants left onsite that could be negatively impacted by possible geothermal well excavation

- Meeting with area historic sites and neighbors who have recently upgraded their HVAC systems
- Replacing electrical load centers to support future HVAC system upgrades (and other site electrical needs)
- Planning for collections microclimates considering individual items, exhibit cases, and/or rooms/zones

### ***Next Steps –***

In addition to implementing the panel recommendations included above, Dumbarton House will also be:

- Applying for a subsequent NEH grant to secure funds for the final design and implementation of a new system
- Planning a capital campaign to raise sufficient funds for HVAC and other capital improvements enumerated in our updated Strategic Plan
- Identifying additional sources of grant funding from the city, local and family foundations, and national organizations
- Sharing this grant project experience as a template/model for other historic sites and museums through publications and conference presentations for the NSCDA, VAM, SMA, AASLH, and AAM

### ***Questions to Consider ~***

As you consider a similar study, here are some questions to consider:

- Who should be included in your team?
  - o Consider subject matter experts (conservators, architects, engineers, etc.), but also key decision makers (board members, foundation representatives, community representatives)
  - o Ensure interdisciplinary representation (facilities, curatorial, interpretation, volunteer management, special events, etc.)
- What is your timeline/schedule?
  - o Expect it to be challenging to find dates that work for everyone, and give yourself cushion for scheduling meetings
  - o Allow sufficient time for staff review and analysis of submitted reports and preparation for meetings
- What funding will you need?
  - o NEH Planning Grants can include funding for implementing consultant recommendations during the grant period

- Can you predict the types of assessments or remediation your study team might recommend? If so, secure ballpark budget estimates in advance to help prioritize with available funds.
- What will you do with your results?
  - You'll be investing a lot of time and resources into this kind of study, so think about ways to leverage your findings.
  - Certainly the project will assist with your long-term HVAC system planning efforts, but can it also help with seeking funding?
  - Can your work inform the field?
  - Could marketing your efforts lead to increased visitation or visibility in your community or recognition within the field?